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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 967,144	09 28 2001	C. W. Luttrell	01RE070 RE-EL-0022	4937

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EXAMINER

CUEVAS, PEDRO J

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 05/21 2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

09/967,144

Applicant(s)

LUTTRELL ET AL.

Examiner

Pedro J. Cuevas

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Four Pole Coil Arrangement For A 72 Slot Stator And Three-Phase Motor Incorporating The Same.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-25, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,127,787 to Auinger.

Auinger clearly teaches the construction of a changeable pole three phase winding stator comprising:

a core having first and second ends and a plurality of radially disposed slots
extending between the first and second ends;

a first plurality of concentric coil groups including four coils disposed in the slots to define a first two poles, the first plurality of coil groups each comprising a plurality of coils having leads exiting the stator core at the first end thereof; and

a second plurality of concentric coil groups including four coils disposed in the slots to define a second two poles, the second plurality of coil groups each comprising a plurality of coils having leads exiting the stator core at the second end thereof;

wherein the first and second pluralities of coil groups are configured to define four poles for receiving three phase alternating current;

wherein the coil groups are disposed in an order of A1, B4, C2, A3, B1, C4, M, B3, C1, A4, B2, and C3, where A, B and C represent alternating current phases, and 1, 2, 3 and 4 represent respective coil groups of each phase, and

wherein the stator core includes 72 slots and each coil group includes 4 coils.

5. With regards to claims 4-7, 10-25, Auinger also disclose:

each coil group including at least one/two coil of a first cross-sectional area disposed singularly within a respective slot, and at least one/two coil of a second cross-sectional area smaller than the first cross-sectional area disposed within a respective slot shared with a coil of another group;

within each group, the coils of the first cross-sectional area of each group are disposed in slots circumferentially outside slots in which the coils of the second cross-sectional area are disposed;

coils sharing slots and exiting at the first end of the stator core are disposed in radially outer positions of the respective slots, and coils sharing slots and exiting at the

second end of the stator core are disposed in radially inner positions of the respective slots;

the first half includes coil groups A1, B4, C2, A3, B1, and C4, and the second half includes coil groups A2, B3, C1, A4, B2, and C3;

each coil group includes at least one coil of a first cross-sectional area disposed singularly within a respective slot, and at least one coil of a second cross-sectional area smaller than the first cross-sectional area disposed within a respective slot shared with a coil of another group;

each coil group includes two coils of the first cross-sectional area disposed singularly within respective slots, and two coils of the second cross-sectional area disposed within respective slots shared with coils of other groups;

within each group, the coils of the first cross-sectional area of each group are disposed in slots circumferentially outside slots in which the coils of the second cross-sectional area are disposed;

coils sharing slots and exiting at the first end of the stator core are disposed in radially outer positions of the respective slots, and coils sharing slots and exiting at the second end of the stator core are disposed in radially inner positions of the respective slots;

a core having a plurality of radially disposed slots extending between first and second axial ends thereof, and a plurality of coils disposed as set forth in Table 2.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 26-28, and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,127,787 to Auinger in view of U.S. Patent No. 5,714,821 to Dittman.

Auinger disclose the construction of a changeable pole three phase winding stator as described above.

However, it fails to disclose a housing and a rotor disposed for rotation within the housing.

Dittman teach the construction of an alternating current generator with direct connected exciter winding having a housing and a rotor disposed for rotation within the housing for the purpose of providing a fully functional and workable generator.

It would have been obvious to one skilled in the art at the time the invention was made to use the housing and rotor disclosed by Dittman on the changeable pole three phase winding stator disclosed by Auinger for the purpose of providing a fully functional and workable generator.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (703) 308-4904. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R. Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Pedro J. Cuevas
May 19, 2003

